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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,910	07/31/2001	Keun-Shik Nah	06192.0210.NPUS00	1154
7590	01/12/2005			EXAMINER AMINI, JAVID A
			ART UNIT 2672	PAPER NUMBER

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/917,910	NAH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 05 August 2004.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) \_\_\_\_\_ is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-14 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date .  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

***Response to Arguments***

Applicant's arguments filed August 05, 2004 have been fully considered but they are not persuasive.

Applicant on page 5 lines 11-17 argues that the reference or combined references do not suggest or motivate. Further on the same page 5 lines 15-16 discloses a statement from MPEP under subject of "ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS", quote: the motivation to modify the prior art and the reasonable expectation of success must both be found the in prior art and not base upon a patent application's disclosure. The correct and clear quotation from MPEP is following: *there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.* Examiner's comment: Application should be paid more attention to the under lined words.

Applicant on page 6 lines 1-6 argues the references do not disclose or suggest the features in claim 1, "includes measurement information reflective of the actual size of one or more objectives described by the first image information" and in claim 5, "reflective of actual size". Examiner's reply: the term "reflective" (see hyper-dictionary online at address of <http://www.hyperdictionary.com/dictionary/physically>) means capable of physically reflecting light or sound (Examiner interpretation: it is obvious that each one of pixel (dot) capable of physically reflecting light), Applicant does not specify the term "reflective" in the specification. Applicant requires providing a better understanding of the term "reflective".

Examiner's comment: by analyzing the claim language in the claims 1 and 5, a person skill in the art does not recognize displaying the actual size of an object. Another words Applicant argues displaying the actual size of an object, but does not claim displaying the actual size of an object in claims 1 and 5. Examiner's suggestion: Claims 1 and 5 require modification.

Applicant on page 6 lines 13-18 argues the JP 358 may discloses the conversion of image sizes between two devices, but does not include measurement information "reflective of the actual size" of an object in an image. Applicant on page 1 lines 20-22 of the specification discloses "it is an object of the present invention to provide a real size display system in which images appear on a digital display in actual sizes when an actual scale option is selected". Also Applicant on page 4 lines 8-14 discloses "As shown in the drawing, a distance between a subject and an image has the relationship of  $l/a + l/b = 2/f$ , and can be measured using lasers, ultrasonic waves, etc. That is, taking into account a magnification of a lens and distance, the actual size of a subject is measured". Examiner's comment: it is not clear what is the definition of "the actual size" in this invention base on the following example: (assuming the diameter of an apple is 2") an image of an apple with 2" of diameter can be displayed on a second display with the same size of 2" of diameter. Now assuming a height of an object is 100 feet (it is an actual size);

Questions:

1. How would it be displayed as an actual size in respect to the above assumptions?
2. Does Applicant mean, where the images are displayed in a screen size, which is a reference for an image source without depending on display screen sizes?

Applicant on page 6 lines 19-20 and on page 7 lines 1-2 argues the Examiner admits the reference JP 358 discloses conversion of system coordinates (x y) of a pixel unit (equivalents to

dots, as applicant 's claim language). Examiner's reply: a person skill in the art would have comprehended from the above argument that the reference JP 358 converts images from one device to another device using coordinate systems (number of pixels computed in horizontal direction that is X coordinate and number of pixels computed in vertical direction that is Y coordinate).

Applicant on page 7 lines 15-21 argues the Examiner asserts that "the steps are obvious ..." and at the bottom of page 7 specified the Examiner used improper term. Examiner's reply: the meaning of the "steps" here is "arrangements".

Applicant on page 7 line 21 argues the Examiner may be taking official notice or reasoning without evidentiary support to make the rejection. Examiner reply: Examiner rejected the claim 2 as obviousness, because Applicant uses general terms, which can be applied to most of image displaying systems. The general terms are: Magnification, Horizontal synchronization signal, Vertical synchronization signal and Clock signal. The mentioned terms can be found in most of Computer Graphics book (for example: Computer Graphics: principles and practice, Foley) and another Computer Graphics book (for example: the Image processing Handbook fourth Edition, John C. Russ since 1992). The confusing term "measured distance data" in the claims 2 and 6.

Applicant claimed in the preamble of claims 1 and 5 "A real size display system, comprising:" and claiming in the claim 5 second line "a photographing unit" (Examiner's interpretation: meaning a camera or a video unit equipped with a zooming option (measured distance data). An ordinary person would have adjusted the lenses manually with older unit and electronically with the newer version of those units).

Questions:

1. Does Applicant mean the zooming option by using the term measured distance data?
2. Does Applicant using 3-D or 2-D images?
3. How does Applicant display the measured distance data on the display image?
4. Does the “measured distance data” attached to the real size display system or it is a separate unit (portable)?
5. How does operate in different environments (light and dark areas)?

Examiner refers Applicant to read the abstract in the reference JP 375: teaches an automatic display of videos at the same size as in the case where the videos are displayed in a screen size which is a reference for a video source without depending on display screen sizes.

Examiner's suggestion: Applicant requires being more explicit about the broad term “component” in claims 4 and 8.

**Note: Examiner encourages Applicant to schedule an interview.**

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant does not specify the term “reflective” in the specification. Applicant requires providing a better understanding of the term “reflective”.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Funakoshi, and further in view of Yamamura.

1. Claim 1.

“A real size display system, comprising: a flat panel display unit including a plurality of dots for displaying image information and providing information on a size of the dots; and an image converter that receives first image information, converts the first image information into second image information and outputs the second information to the flat panel display unit, wherein the first image information includes measurement information reflective of the actual size of one or more objects described by the first image information, and wherein the first image information is converted into the second image information based on the dot size information received from the flat panel display unit”, Funakoshi in paragraph 0024 discloses that the image information can be repeated and a right gage can be displayed on a real size display by changing into the system of coordinates (x y) of a pixel unit (equivalents to dots ,as applicant ‘s claim language). The step of a display unit including a plurality of dots for displaying image information is obvious because

the two references Yamamura and Funakoshi are using a display unit to display a document image or video image, and also it is well known in the art that the display unit including a plurality of dots or pixels. Yamamura in paragraph 0004 discloses that is creating the source of an image for every display size (*is equivalent of a display resolution: The number of pixels (in both height and width) making up an image. The more pixels in an image, the higher the resolution, and the higher the resolution of an image, the greater its clarity and definition (and the larger the file size).*). *Resolution can also refer to the output device, such as a computer monitor or printer, used to display the image. Image file resolution is often expressed as a ratio (such as 640x480 pixels), as is monitor resolution; however, resolution is also expressed in terms of dots per inch (dpi). The assumed universal monitor resolution for web users is 72 dpi. Image file resolution and output (print or display) resolution combine to influence the clarity of a digital image when it is viewed*) of a graphic display device, the class of source of an image to create increases and it is not realistic. Moreover, if it is expanding or reducing the size of an image, using the same source of an image so that the magnitude of a photographic subject may be kept constant, the need of carrying out delicate size adjustment will arise, taking into consideration the size of the source of an image, and the display size of a graphic display device. In order to carry out this adjustment, the ruler used as criteria etc. is displayed on a graphic display device, and size adjustment will be performed, comparing this with actual magnitude. It must carry out, whenever it is necessary to do such an activity for every graphic display device and the sources of an image differ. Therefore the step of image information based on the dot size information received from the display unit is obvious. Funakoshi in paragraph 0021 teaches in drawing 7, it is expressing that the coordinates of point P are (u, v) as P (u, v). Moreover, in case these coordinates are the system of coordinates (u, v) of the real size unit on a print and display these on CRT, they shall be changed into the system of

coordinates (x y) which make the pixel of CRT a unit automatically. Examiner's note: the image conversion is done from coordinates (u, v) into of coordinates (x, y). Funakoshi on first page under subject of "solution" teaches a real size display part 33 is shown on a document image shown on a display screen and then changed into optional location. Funakoshi does not explicitly specify a flat panel display, but Funakoshi discloses a CRT display that can have a flat panel display. However, Yamamura teaches in paragraph 0016, a graphic display device 3 can display the source of an image from the picture reproducer 2 amended by the image size compensator 1, and various things, such as what is depended on the Braun tube, and a thing using liquid crystal (equivalent to LCD, that has a flat panel display), can be used for it.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yamamura into Funakoshi in order to enable automatic display of videos at the same size using liquid crystal.

2. Claim 2.

"The real size display system according to claim 1, wherein the first image information includes magnification, horizontal synchronization signal, vertical synchronization signal, clock and measured distance data", The following arrangements are obvious, because image information should have magnification, horizontal synchronization signal, vertical synchronization signal, clock and measured distance data. Applicant should be more explicit about mentioned information rather than general terms.

3. Claim 3.

"The real size display system according to claim 1, wherein the flat panel display system includes a controller that enables magnification adjustment of the second image information,

thereby enabling real size display as desired by a user”, Funakoshi in paragraph 0024 teaches the limitation of claim language. And also Yamamura teaches in paragraph 0008, that in order to corrects an image size from a source of image, and display in an image display unit, wherein a correction factor between the display size of the display source and display size of the image display unit is generated, and the above source of image is enlarged or reduced based on the correction factor.

4. Claim 4.

“The real size display system according to claim 1, wherein the image converter extracts an R component, G component, and B component from the first image information, then converts the extracted R, G, B image signals based on the dot size information provided from the display unit, and outputs the second image information to the flat panel display unit”, Applicant should be more explicit about R component, G component, and B component, because it is well known to a person skilled in the art that the opacity is the amount of light passes thru an object pixel. And the brightness/intensity/luminance is defined as quantity of light. The light is combination of R component, G component, and B component.

5. Claim 5.

“A real size display system, comprising: a photographing unit for photographing an image of a subject, and outputting first image information that includes measurement information reflective of the actual size of the subject; a flat panel display unit including a plurality of dots for displaying image information and providing information on a size of the dots; and an image converter that receives first image information, converts the first image information into second image information and outputs the second information to the flat panel display unit, wherein the

first image information includes the measurement information, and wherein the first image information is converted into the second image information based on the dot size information received from the flat panel display unit”, Yamamura teaches in paragraph 0008, that in order to corrects an image size from a source of image, and display in an image display unit, wherein a correction factor between the display size of the display source and display size of the image display unit is generated, and the above source of image is enlarged or reduced based on the correction factor. The step of the first image information includes measurement information is obvious because the first image can be provided by picture device or camera. This device can estimate the distance of an object. And also the step of converting first image information into second image information is obvious because by converting first image information (an image from camera or etc.), creating second image information (the actual size of an object). And also see rejection of claim 1.

6. Claim 6.

“The real size display system according to claim 5, wherein the first image information includes magnification, horizontal synchronization signal, vertical synchronization signal, clock and measured distance data”, see rejection of claim 2.

7. Claim 7.

“The real size display system according to claim 5, wherein the flat panel display system includes a controller that enables magnification adjustment of the second image information, thereby enabling real size display as desired by the user”, Yamamura teaches in paragraph 0008, that in order to corrects an image size from a source of image, and display in an image display unit, wherein a correction factor between the display size of the display source and display size

Art Unit: 2672

of the image display unit is generated, and the above source of image is enlarged or reduced based on the correction factor. See rejection of claim 3.

8. Claim 8.

“The real size display system according to claim 5, wherein the image converter extracts an R component, G component, and B component from the first image information, then converts the extracted R, G, B image signals based on the dot size information provided from the display unit, and outputs the second image information to the flat panel display unit”, see rejection of claim 4.

9. Claim 9.

The step is obvious, because Yamamura in paragraph 0015 teaches the step of “The real size display system according to claim 1, wherein a real size of a subject of the first image information and the second image information is measured to generate the measurement information”. And also see rejection of claim 1.

10. Claim 10.

The step is obvious, because Yamamura in paragraph 0015 teaches the step of “The real size display system according to claim 9, wherein the (Yamamura in paragraph 0016 teaches a LCD) flat panel display unit uses the second image information to display an image of the subject and a size of the displayed subject is the real size of the subject. And also see rejection of claim 1.

11. Claim 11.

Funakoshi in paragraph 0008 teaches the step of “The real size display system is according to claim 5, wherein a distance between the subject and the image of the subject is measured to generate the measurement information”. And also see rejection of claim 1.

12. Claim 12.

“The real size display system according to claim 10, wherein the flat panel display unit uses the second image information to display a second image of the subject and a size of the displayed subject is the real size of the subject”. See rejection of claim 1.

13. Claim 13.

“The real size display system according to claim 1, wherein the flat panel display unit comprises at least one of a button, a switch, a touch-operated icon on a screen of the flat panel display for enabling real-size display operation”. Funakoshi illustrates it in drawing 4.

14. Claim 14.

“The real size display system according to claim 5, wherein the flat panel display unit comprises at least one of a button, a switch, a touch-operated icon on a screen of the flat panel display for enabling real-size display operation”. Funakoshi illustrates it in drawing 4

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

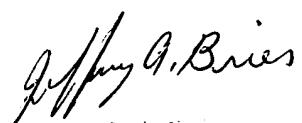
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner  
Art Unit 2672

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JEFFREY A. BRIES  
PRIMARY EXAMINER